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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/406,570 09/24/99 SHIMIZU

A 2271/57219-A

EXAMINER

WM01/0124

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PSIDS, A

ART UNIT

PAPER NUMBER

2651

DATE MAILED:

01/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/406,570

Applicant(s)

SHIMIZU ET AL.

Examiner

Aristotelis M Psitos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on 11/22/00 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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DETAILED ACTION

Applicants' communication of 11/22/00 has been received and entered. The following action is in response.

The amendment to the title of the invention is acknowledged. The examiner thanks applicants' cooperation in providing the new title.

Drawings

✓ The amendment to Figure 17 as --Prior Art is acknowledged and approved by the examiner. ✓

The drawings are objected to for not showing all the features claimed, i.e., the method limitations of claims 18 and 7. Either submission of figs. are required, or cancellation of this subject matter.

Additionally, a review of figs 6a and c, lead the examiner to conclude that what is labeled L in fig. 6a is actually the width of the partition wall. The formula depicted/claimed in claim 18 is not understood, as presented. Is applicant intending to say that the width (designated by the Greek letter delta) the result of subtracting a value equal to the sum of the two components, $BD1/2$ PLUS $BD2/2$, or something else. ✓

Further clarification is respectfully requested.

Claim Rejections - 35 U.S.C. § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

As disclosed, the specification recites/requires that there is a connection of the phase pit with one of the information tracks. There is no disclosure wherein such a connection is not found.

Report
Claims 8 -12 and ^{claim 13 okay} ~~13~~-17 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The connection of the phase pit and the information track being critical or essential to the practice of the invention, but not included in the claim 8 is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Dependent claims 9-12 fail to clarify the above critical subject matter and fall with their respective parent claim.

8-12, 7

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Also, with respect to claim 13, a partition wall separates the phase pits. There is no disclosure where such a separation does not exist. Hence this critical subject matter is missing from the claim. Dependent claims 12-17 fail to clarify the above and fall with their respective parent claim.

Additionally, with respect to claim 8 as disclosed, the phase pit depth and the information track depth are equal. There is no range of values disclosed that would enable one of ordinary skill in the art to establish when such elements are of "substantially equal depth".

Claims 8-12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In particular, the disclosure as originally present provided for a separation between the phase pit and one of the adjacent information tracks by a "partition wall". Claim 8 now recites "partition walls". Since the examiner can not readily ascertain where in the original disclosure such existed, the above new matter rejection is made. Absent any disclosure thereto, cancellation of such subject matter is required.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5, and 8-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants' have submitted three independent product claims.

The examiner can not discern any patentable features missing from the independent claims, i.e., all the limitations of claim 1 are found in claims 8 and 13. Similarly, all the limitations of claim 8 are found in claims 1 and 13, and all the limitations of claim 13 are found in claim 1 and 8.

With respect to claims 1 and 8, as argued/stated in applicants' response on pg. 7, these claims differ in three aspects:

a) no grooves in claim 1, whereas there are grooves in claim 8.

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Since the only disclosure in the specification is to grooves, claim 1 fails to recite critical subject matter – grooves less medium is NOT disclosed. The examiner suggests amending claim 1 accordingly.

b) no phase pit connection recited in claim 8, but is found in claim 1.

Since the only disclosure in the specification is to a phase pit connection, claim 8 fails to recite critical subject matter. No disclosure drawn to no phase pit connection. The examiner suggests amending claim 8 accordingly.

c) phase depth in claim 1 between the phase pit and track are "substantially equal", whereas in claim 8 they are equal.

Since there is no DISCLOSURE for one of ordinary skill in the art to ascertain what is "substantially equal depth" as opposed to equal depth, claim 1 is drawn to an INSUFFICIENT disclosure. - see above rejection thereof and hence the claim also fails to particularly point out and distinctly claim the invention.

When such amendments are done, claim 1 and claim 8 would be identical.

With respect to claims 8 and 13, applicants argue on page 2-3 of the above response, these claims differ in one aspect:

a) claim 8 recites partition wall(s) separating the adjacent tracks; unfortunately, no such disclosure is found – hence the new matter rejection above. The examiner can only find reference to separation of the adjacent tracks by a partition wall. Correction of course is required, and once corrected these claims define no patentable distinction.

Hence the examiner cannot readily ascertain the distinction between these independent claims.

The dependent claims fail to correct the above deficiency and fall with their respective parent claim.

Claim Rejections - 35 U.S.C. § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 18, 7, 8 and 13 are rejected under 35 U.S.C. 103 as being obvious over the acknowledged prior art.

✓ *quest* The product claims, claims 1, 8 and 13 read upon applicants' description of the prior art as found on page 5 of the specification with respect to fig. 14 and Official notice.

As depicted/claimed, there is an optical record – medium – having information tracks extending circumferentially. This is depicted in this fig. Furthermore, there is a first and second information track – see the description of this fig. and the labeling thereof of a first and second information track, wherein a phase pit (so labeled) is connected to the second track, extending but not reaching the first track and separated from the first track by a partition wall. The examiner considers the phase pit and groove pit depth to be equal, hence substantially equal as well.

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The remaining requirement (with respect to claim 1): that the phase pit "encoding information for the first information track" is what is defined by the phase pit that is connected to the second track has not been specifically stated in applicants' description of this prior art. Applicants' cooperation in providing a copy thereof and an English translation if not in English in order to complete the search report is respectfully requested.

The ability of having the standard pre-pit information for an associated track is considered to be notoriously old and well known an Official notice is taken thereof. The examiner considers that to be the pre-pit designated in the prior art fig. The additional requirement that this information is for the first information track is considered an obvious variant of having trailing information. The concept of trailing information is one in which information indicative of what has just occurred, transpired, or has just previously passed by is routine in the information arts, sometimes called "trailers", or postamble information.

The placement of either preamble or postamble information is merely a substitute of equivalents and a rearrangement of parts with no unexpected results seen to occur thereof. This argument is also present for the product claims 8 and 13.

The examiner interprets the method limitations of claims 18 and 7 as flowing from the product, and hence present in the prior art.

4. Claims 2,3,9,10,11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art as applied to claims 1,8 and 13 above, and further in view of Tsuchiya et al.

The limitations recited (it is noted that claims 9,10, 11 and 15 duplicate claims 2 and 3 respectively, and hence the examiner will only discuss the limitations of claims 2 and 3 specifically, but the position taken is the same for claims 9,10,11 and 15) are found in the secondary reference to Tsuchiya et al - note his values for TP(track pitch), spot size, pit width.

Although the groove width is not specifically recited, the examiner takes the position that the groove width in this environment ranges from .4 to .6 micrometers.

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The examiner interprets the limitations of these claims to be modifications of the acknowledged prior art in order to maximize/optimize system parameters. Obviously the ability to provide for cross talk prevention is one of those parameters as is increasing recording density.

5. Claims 2-5,9-12,14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art as applied to claims 1,8 and 13 above, and further in view of

Mieda et al or Sugaya et al

Again, the limitations of claims 9-12 and 14-17 are found in claims 2-5, and hence the examiner will discuss the limitations of claims 2-5.

Either Mieda et al or Sugaya et al depicts optical records having a plurality of pit formats available for maximizing system parameters such as cross talk reduction/ increasing recording density.

In Mieda et al, figs. 3-5 provide for a variety of parameters to be varied.

The examiner interprets the "short pit" parameters for meeting the limitations of claims 2 & 3, while the "long pit" parameters for the limitations of claims 4 and 5.

It would have been obvious to one of ordinary skill in the art to modify the acknowledged prior art with the above teachings from Mieda et al -motivation being to maximize system parameters.

Applicants' attention is also drawn to Sugaya et al which also teaches the parameter variations re TP, LP, BD and can be relied upon to meet the limitations of claims 2,3, 9,10,14 and 15.

Conclusion

Applicants' arguments of Nov. 11, 2000 have been considered but are not persuasive. The examiner has interpreted the claims to mean that there is a physical space separating the phase pits found with one groove (information track) and an adjacent information groove track. Applicants designate such as "partition wall". This is considered present in the above acknowledged prior art, and or in the additional references a-d cited above.

The examiner appreciates applicants attempt to define over the prior art by including a limitation associating the information, phase pit, not with the groove connected to, but an adjacent one. Nevertheless, the examiner considers such an association as merely an ability of placing the -pre-amble - phase pit into the well known postamble position, hence the rejection under 35 USC 103 - re trailers.

✓

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Applicants' attention is also drawn to the following references and analysis thereof

a) Matsuura – see fig. 2, wherein grooves 61 and 63 are for information – tracks, and section 62 is the land in between. P1 and P2 , P3 are the pre-pits and not that the pre-pits designated as P3 are indeed separated from the adjacent groove section 61 by a land area – the partition wall as recited in applicants claimed.

b) Nakane et al – fig. 1, wherein the pre-pit area of the second groove (middle groove depicted) is separated from the first (top most groove) by a land area – which can be interpreted as the partition wall claimed.

c) Inui et al – fig. 1, wherein the serrated edge S2 of the same depth of groove 21 is separated from the adjacent groove by an area – which can be interpreted as the partition wall claimed.

d) Nishikawa – fig. 2 – all of them.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8-4 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703) 308-4825. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6606 for regular communications and (703) 308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH**

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shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Aristotelis M Psitos
Primary Examiner
Art Unit 2651

amp
January 8, 2001